

efficacy of the documentation the BOC makes available for the purpose of building an electronic gateway.”<sup>135</sup> Overarching each of these five points is the general requirement that the BOC must show that it has adhered to its Change Management process over time. In approving the Change Management processes of VZ-NY and Southwest Bell Texas (“SWBT”), the FCC noted that while these five factors are indicative of what is necessary for a BOC to show that its Change Management process meets the requirements of nondiscrimination, the FCC does not rule out the possibility that other Change Management plans may meet its requirements as well.<sup>136</sup>

(B) VZ-MA’s Offering

VZ-MA follows the same Change Management process in Massachusetts that is in place in New York, and VZ-MA states that the majority of system changes implemented in Massachusetts are implemented at the same time in New York as well.<sup>137</sup> VZ-MA notes that its Change Management process is outlined in a single document and is designed to “accommodate changes requested by CLECs, changes requested by [VZ-MA], emergency changes and changes required by standards bodies or regulatory authorities.”<sup>138</sup>

VZ-MA follows its defined Change Management process for all CLEC-affecting

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<sup>135</sup> Id.

<sup>136</sup> Bell Atlantic New York Order at ¶ 111; SBC Texas Order at ¶ 109 and n.282.

<sup>137</sup> VZ-MA Application, Appdx. B, Vol. 32b, Tab 423, ¶ 153 (VZ-MA May OSS Aff.).

<sup>138</sup> Id.

software releases.<sup>139</sup> There are currently more than 500 individual CLEC users participating in the Change Management process who receive change notices and updates from VZ-MA.<sup>140</sup> Under the defined process, VZ-MA releases its draft business rules and technical specifications to CLECs 73 days before implementation of the changes. CLECs then have time to file comments with VZ-MA on the draft business rules and specifications, and VZ-MA is required under the Change Management process to publish final business rules and specifications 45 days prior to implementation of the changes.<sup>141</sup> VZ-MA notes that in the case of changes to industry standards, VZ-MA works in unison with the CLECs to develop a customized schedule for the release of draft specifications and business rules, CLEC comments, and the publication of final documentation.<sup>142</sup>

VZ-MA notes that CLECs have extensive opportunities to provide input during the

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<sup>139</sup> VZ-MA does not use its Change Management process to notify CLECs of infrastructure changes that have no effect on the CLEC's interaction with VZ-MA's OSS systems. For example, VZ-MA was not required under the Change Management process to notify CLECs of the changes and upgrades that were made in May and June 2000 to its web-based Graphical User Interface ("GUI") to address outages and slow-downs in performance. Once VZ-MA implemented these infrastructure changes and monitored their performance, the company notified CLECs of the changes that were made and the results of these upgrades. See VZ-MA Application, Appdx. B, Vol. 46, Tab 538, 4764-65 (Transcript of Technical Session 8/22/00); see also Section V.B.1.e.ii, below, for discussion of VZ-MA's GUI availability problems and upgrades.

<sup>140</sup> VZ-MA Application, Appdx. B, Vol. 32b, Tab 423, ¶ 155 (VZ-MA May OSS Aff.).

<sup>141</sup> Id.

<sup>142</sup> Id. at ¶ 156.

Change Management process. First, VZ-MA's Change Management process was developed through a collaborative effort with CLECs.<sup>143</sup> Further, CLECs have the opportunity through the defined Change Management process to submit formal comments on VZ-MA's planned software releases. More significantly, CLECs play a vital role in the scheduling of systems changes. VZ-MA states that it utilizes a process to prioritize and schedule planned systems changes that involves the input of both VZ-MA and the CLECs. VZ-MA explains that all VZ-MA-initiated and CLEC-initiated changes are assigned priorities based on agreed-upon criteria through a joint process with the CLECs. The changes are then ranked and scheduled according to their assigned priorities.<sup>144</sup> VZ-MA notes that this joint prioritization process was used in the Autumn of 1999 to address changes to be implemented in VZ-MA's LSOG-4 software release. VZ-MA states that the result of that process placed the region-wide uniformity of LSOG-4 business rules as the highest priority, and, as a result, VZ-MA implemented 17 changes in its March 1, 2000 LSOG-4 release and 22 changes in its June 2000 release that were designed to bring Verizon's business rules into uniformity across the region.<sup>145</sup>

The Department has adopted the same performance standards used in New York to measure VZ-MA's ability to follow the Change Management process. VZ-MA measures the

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<sup>143</sup> Id. at ¶ 153.

<sup>144</sup> Id. at ¶ 161.

<sup>145</sup> Id.

timeliness of its notification and documentation releases, the timeliness of unscheduled interface outage notices, the accuracy of new software releases, and the timeliness of new software corrections.<sup>146</sup> For each of these Change Management performance metrics, VZ-MA must meet a C2C standard of 95 percent on-time performance, with an additional requirement that no notification or documentation releases may be delayed longer than eight days.<sup>147</sup>

For the period of April through July 2000, VZ-MA's performance with regard to the timely release of documentation and notification met or exceeded C2C standards on all but two occasions. VZ-MA missed its performance standard for on-time Emergency Maintenance notifications in both April and June. However, VZ-MA's 80 percent on-time performance in April represents only one missed notice out of five opportunities, and the 93 percent performance in June represents only one late notice in 15 opportunities. In aggregate over the four-month period, VZ-MA sent emergency maintenance notices late in only these two instances out of a total of 45 emergency maintenance notices sent. With respect to interface outage notifications, VZ-MA met its requirement to provide notice to CLECs within twenty minutes of any outage in April, May, and June (there were no unscheduled interface outages in July). VZ-MA has not yet begun reporting its software corrections timeliness metrics, and began reporting its software accuracy metric in July 2000, but had no software releases subject

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<sup>146</sup> VZ-MA Application, Appdx. B, Vol. 32a, Tab 423, ¶ 28 (VZ-MA May Measurements Aff.).

<sup>147</sup> Id. at ¶¶ 32, 34.

to the metric performance during that month.

At times it is necessary for VZ-MA to implement systems changes that can not be put through the extended documentation review cycle. To meet these needs, VZ-MA uses Type I bulletins (formerly referred to as FLASH announcements) to notify CLECs of changes that need to be made on an expedited basis. VZ-MA states that it uses Type I bulletins to notify CLECs of changes that are implemented to correct software defects or documentation errors that prevent one or more CLECs from submitting certain types of orders.<sup>148</sup> VZ-MA explains that while these Type I notices may not always address issues that cause a “risk of system outage or of ‘putting a CLEC out of business,’” they still must be implemented quickly in order to enable CLECs that are developing interfaces or submitting orders to avoid potential errors based on software or documentation problems.<sup>149</sup> VZ-MA notes further that it began a process to revise its emergency notification procedures in May 1999, and in February 2000, after numerous meetings and reviews of the process with CLECs, VZ-MA published its final emergency notification guidelines.<sup>150</sup> Finally, VZ-MA states that before any Type I bulletin is sent to the CLEC community, it is reviewed by VZ-MA’s technical experts and Change Management personnel for accuracy, completeness, and clarity. Following the release of Type I notices, VZ-MA states that it holds industry conference calls to ensure that all affected parties

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<sup>148</sup> VZ-MA Application, Appdx. B, Vol. 32b, Tab 423, ¶ 168 (VZ-MA May OSS Aff.).

<sup>149</sup> Id.

<sup>150</sup> Id. at ¶¶ 165-166.

understand the information in the bulletin.<sup>151</sup>

VZ-MA states that it follows the same Change Management dispute resolution process in Massachusetts that is used in New York. VZ-MA explains that any CLEC may escalate disputes related to the Change Management process first to the Change Management Director and, if necessary, to the Verizon Vice President. VZ-MA's dispute resolution process also provides either party with the opportunity to bring disputes to the Department if resolution is not possible between the parties on their own.<sup>152</sup> VZ-MA notes that the Change Management dispute resolution process was used by CLECs to request that VZ-MA keep the web-based Phase II GUI available until all problems with the Phase III GUI had been addressed and resolved. VZ-MA states that the retirement of the Phase II GUI was deferred three times through the escalation process.<sup>153</sup>

Once VZ-MA has presented the final business rules and technical specifications to the CLECs, it begins the process of internally testing the software release and implementing changes prior to releasing the software into the CLEC Test Environment ("CTE").<sup>154</sup> VZ-MA explains that its internal quality assurance ("QA") testing involves a number of separate tests

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<sup>151</sup> VZ-MA Application, Appdx. B, Vol. 34b, Tab 443 (VZ-MA's Response to DTE-WorldCom-4-13).

<sup>152</sup> VZ-MA Application, Appdx. B, Vol. 32b, Tab 423, ¶ 163 (VZ-MA May OSS Aff.).

<sup>153</sup> Id.

<sup>154</sup> Id. at ¶ 157.

that are conducted to ensure the quality and stability of VZ-MA's software releases.<sup>155</sup> For example, VZ-MA notes that the LSOG-4 software release went through three levels of internal testing before it was released into the CTE. First, VZ-MA states that the software developer performed unit and string testing on the software modules to ensure that they operated as designed. Next, VZ-MA performed "Near Neighbor" testing to determine whether there were any problems with the interactions between separate software modules within each application and between applications. Finally, VZ-MA performs QA or Integration Testing, which involves building and executing various progression and regression test cases based on the final documentation and verifying the results of each test case.<sup>156</sup>

Once the internal QA testing is complete, VZ-MA releases the software changes into the CTE for CLEC new release testing four weeks prior to implementation of the software release into the production environment. The CTE allows CLECs to test the interaction between their own interfaces and the new VZ-MA software. VZ-MA states that the CTE is a mirror of the production environment so that CLECs can expect that the results from transactions in the CTE will be identical to the results for the same transaction in production.<sup>157</sup> VZ-MA also notes that for each software release it develops a formal set of test transactions,

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<sup>155</sup> VZ-MA Application, Appdx. B, Vol. 34b, Tab 443 (VZ-MA's Response to DTE-WorldCom-4-2(b)).

<sup>156</sup> Id.

<sup>157</sup> VZ-MA Application, Appdx. B, Vol. 32b, Tab 423, ¶ 172 (VZ-MA May OSS Aff.).

known as the Quality Baseline Validation Test Deck ("Test Deck"), which CLECs can use to simulate the common types of pre-order and order transactions that a CLEC would expect to use in its daily business operations. The Test Deck is also used by VZ-MA in the production environment at the end of the testing period to show that the CTE and production environments will provide the same transaction results.<sup>158</sup>

Apart from using the Test Deck, CLECs are able to develop and use their own testing scenarios in the CTE if they want to test transaction types more specific to their own business needs. VZ-MA notes that throughout the CLEC new release testing period, CLECs have access to dedicated testing coordinators to address any problems that arise in the CTE.<sup>159</sup> The CLEC testing procedures also include procedures for CLECs to report any problems to VZ-MA that need to be fixed for retesting.<sup>160</sup>

VZ-MA has used its Change Management process for extensive software releases. Notably, in February 2000, VZ-MA released the LSOG-4 software in addition to implementing the changes that were agreed upon during the Autumn 1999 uniform business rules collaborative process. VZ-MA states that the February 2000 release was the largest wholesale

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<sup>158</sup> Id.

<sup>159</sup> Id. at ¶ 173.

<sup>160</sup> Id. at ¶ 172.



services release in Verizon's history.<sup>161</sup> VZ-MA explains that, because of the size of this release, and because the February release was the first to utilize the CTE outside of New York, the release did not go as well as VZ-MA had planned. VZ-MA states that the release included over 400 Test Deck scenarios in the CTE, and the volume of the Test Deck made it difficult for VZ-MA to validate all of the scenarios within the specified test period. VZ-MA states, however, that all of the problems with the February release have been resolved, and that the resolution of these problems with the February release will prevent the same problems from arising again in future releases.<sup>162</sup>

VZ-MA also meets its obligations to provide CLECs with the documentation necessary for developing their own application-to-application interfaces. VZ-MA provides CLECs with both pre-order and order business rules and Electronic Data Interchange ("EDI") interface specifications based on industry standards. In response to earlier CLEC complaints that VZ-MA frequently changes its documentation, VZ-MA notes that it must make changes to its business rules and technical specifications in order to keep its systems current with industry standards and CLEC needs. VZ-MA explains that it abides by the rules of the established Change Management process when it notifies CLECs of all documentation changes. VZ-MA distributes documentation change notifications to all CLECs electronically and holds monthly

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<sup>161</sup> Id.

<sup>162</sup> VZ-MA Application, Appdx. B, Vol. 32b, Tab 423, ¶ 172 (VZ-MA May OSS Aff.).

Change Management meetings with the CLECs to keep them informed of system changes.<sup>163</sup>

In addition to providing business rules and technical specifications, VZ-MA has also developed the Integrated Documentation Application (“IDA”) for CLECs. IDA is a document created by VZ-MA that combines the LSOG Industry Guidelines with the VZ-MA-specific Business Rules.<sup>164</sup> IDA is also capable of automatically generating change logs so that CLECs can more easily track VZ-MA system changes over time. Finally, VZ-MA notes that IDA produces a document that shows the technical specifications and associated business rules in a side-by-side format. VZ-MA states that this document, which it notes is the first of its kind in the industry, enables CLECs to associate the two separate sets of documents with each other much more easily.<sup>165</sup>

With final respect to this checklist item area, VZ-MA has implemented versioning of its application-to-application interface software.<sup>166</sup> The FCC has previously noted that “versioning is one of the most effective means of ensuring that system changes and

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<sup>163</sup> Id. at ¶ 182.

<sup>164</sup> Id. at ¶ 186.

<sup>165</sup> Id.

<sup>166</sup> In the Bell Atlantic New York Order, the FCC noted with approval VZ-NY’s process of maintaining “a pre-existing version [of interface software] after issuing a major new release rather than switching directly from one version to the next.” Bell Atlantic New York Order at ¶ 110. Referring to this practice as “versioning,” in its approval of the SWBT 271 application, the FCC noted that “versioning is integral to a section 271 applicant’s demonstration that the change management plan it has in place affords competing carriers a meaningful opportunity to compete.” SBC Texas Order at ¶ 115.

enhancements do not adversely affect a carrier's ability to access the BOC's OSS."<sup>167</sup> VZ-MA makes available to CLECs both the current and most recent prior versions of its interface software. LSOG-4, implemented on March 1, 2000, is the current VZ-MA interface software for both EDI pre-order and order. Additionally, CLECs may continue to use the prior versions of VZ-MA's interfaces, LSOG-3 for pre-ordering and LSOG-2 for ordering.<sup>168</sup> VZ-MA confirms that LSOG-2/3 will remain available to CLECs in addition to LSOG-4 until the release of the LSOG-5 industry standard software, which currently has no scheduled release date.<sup>169</sup>

(C) Competitors' Positions and VZ-MA's Response

AT&T disputes VZ-MA's assertions that it follows the established Change Management process. First, AT&T contends that VZ-MA consistently makes CLEC-sponsored changes a low priority and often drops such changes from scheduled releases without providing any explanation.<sup>170</sup> AT&T cites the delayed implementation of fielded completion notices and electronic jeopardy notices as examples of VZ-MA's unwillingness to implement CLEC-sponsored changes. AT&T argues that CLECs have pushed Verizon to implement fielded

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<sup>167</sup> SBC Texas Order at ¶ 115.

<sup>168</sup> VZ-MA Application, Appdx. B, Vol. 32b, Tab 423, ¶ 158 (VZ-MA May OSS Aff.).

<sup>169</sup> VZ-MA Application, Appdx. B, Vol. 34a, Tab 443 (VZ-MA's Response to DTE-5-51).

<sup>170</sup> VZ-MA Application, Appdx. B, Vol. 38, Tab 460, at 26 (AT&T July Supplemental Comments).

completion notices throughout the region since 1998, but that Verizon only implemented this change in its June 2000 release, despite being ordered by the NYPSC to implement fielded completion notices by April 2000.<sup>171</sup> AT&T further contends that it first proposed the implementation of electronic jeopardy notices in January 1999, but that VZ-MA still has not implemented this function and will not until the October 2000 release.<sup>172</sup>

VZ-MA notes in response to AT&T's complaints that the prioritization of all changes is a joint effort. VZ-MA states that it schedules CLEC- and VZ-MA-sponsored changes based on the priorities assigned during the monthly Change Management meetings.<sup>173</sup> VZ-MA notes, for example, that in the Fall of 1999, CLECs placed uniform business rules throughout the region as the highest priority in the Change Management process, and, as a result, VZ-MA implemented numerous changes toward that goal in the February and June 2000 releases.<sup>174</sup> With regard to the specific changes cited by AT&T, VZ-MA notes that implementation of fielded completions were scheduled for a December 1999 release, but was delayed due to

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<sup>171</sup> Id.; see also VZ-MA Application, Appdx. B, Vol. 44, Tab 506 (AT&T's Response to DTE-ATT-1-9).

<sup>172</sup> VZ-MA Application, Appdx. B, Vol. 44, Tab 506 (AT&T's Response to DTE-ATT-1-9).

<sup>173</sup> VZ-MA Application, Appdx. B, Vol. 42, Tab 494, ¶ 105 (VZ-MA August Supplemental OSS Aff.).

<sup>174</sup> Id.

CLEC concerns over potential Y2K problems.<sup>175</sup> VZ-MA implemented fielded completions in the June 2000 release.<sup>176</sup> VZ-MA notes also that it scheduled the implementation of electronic jeopardy notifications for two phases, in August and October 2000, but that the August Phase I implementation was delayed at the request of WorldCom because WorldCom was not ready to accommodate the change. VZ-MA states that AT&T agreed to this deferral.<sup>177</sup>

AT&T's second complaint regarding VZ-MA's adherence to the Change Management process lies in VZ-MA's alleged inability to follow its notification procedures. AT&T contends that it experienced significant ordering problems when VZ-MA implemented a Business Rules change on June 14, 2000, but did not notify CLECs of the change until June 19.<sup>178</sup> AT&T argues that VZ-MA's change, prohibiting the use of an optional field, caused AT&T's orders to be rejected because AT&T did not know the Business Rules had been changed. AT&T contends that this error caused a backlog of over 8,000 orders while

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<sup>175</sup> During Department technical sessions, AT&T witness Carmody testified that VZ-MA's offer to implement fielded completions in December 1999 was "a show of providing a date, when in fact they knew it was not actually going to happen." See VZ-MA Application, Appdx. B, Vol. 46, Tab 538, at 4834 (Transcript of Technical Session Held 8/22/00). Carmody further testified that VZ-MA failed to implement this change by a NYPSC-imposed deadline of April 2000. See id. at 4835.

<sup>176</sup> VZ-MA Application, Appdx. B, Vol. 42, Tab 494, ¶ 106 (VZ-MA August Supplemental OSS Aff.).

<sup>177</sup> Id. at ¶ 107.

<sup>178</sup> VZ-MA Application, Appdx. B, Vol. 38, Tab 460, at 25-26 (AT&T July Supplemental Comments).

AT&T waited for VZ-MA to remove the change that was implemented. AT&T further states that it assumed approximately \$25,000 in additional costs to resolve the order backlog.<sup>179</sup>

VZ-MA acknowledges that the incident described by AT&T did occur, but disagrees as to the details. VZ-MA states that the Business Rule change prohibiting the use of the optional field was part of the company's attempt to make its interfaces uniform across the region. VZ-MA notes that the change was implemented on June 18, 2000, not June 14 as AT&T contends, and that the notice was submitted to CLECs on Monday, June 19, 2000.<sup>180</sup> VZ-MA notes further that it did provide notice to CLECs in early June that this change would be forthcoming, but did not specify a date.<sup>181</sup> VZ-MA also notes that as soon as AT&T notified VZ-MA that the change was causing problems, VZ-MA removed the change from the interface so that AT&T could continue to operate.<sup>182</sup> Finally, VZ-MA states that this issue is an isolated incident and does not represent an inherent inability to follow its Change Management process.

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<sup>179</sup> VZ-MA Application, Appdx. B, Vol. 44, Tab 506 (AT&T's Response to DTE-ATT-1-8).

<sup>180</sup> VZ-MA Application, Appdx. B, Vol. 42, Tab 494, ¶ 108 (VZ-MA August Supplemental OSS Aff.).

<sup>181</sup> AT&T acknowledged during Department technical sessions that it did receive actual, if informal, notice from Verizon on June 7, 2000 stating that the Business Rule change was going to happen. However, AT&T states that the June 7 notice assured CLECs that a formal change bulletin would be released prior to implementation. See VZ-MA Application, Appdx. B, Vol. 46, Tab 538, at 4835-38 (Transcript of Technical Session Held 8/22/00).

<sup>182</sup> VZ-MA Application, Appdx. B, Vol. 42, Tab 494, ¶ 108 (VZ-MA August Supplemental OSS Aff.).

WorldCom contends that Verizon has not abided by its established Change Management procedures with respect to the implementation of the ExpressTrak billing system.<sup>183</sup>

WorldCom argues that it has requested from Verizon a conversion timeline detailing how and when Verizon intends to move customers from its current systems to ExpressTrak, but that Verizon has not yet provided such a timeline. WorldCom contends that Verizon has already begun implementing ExpressTrak in some states without providing draft specifications, holding meetings with CLECs, or allowing CLECs to comment on Verizon's proposed plans.

WorldCom also argues that Verizon has not provided a test period for CLECs to test the ExpressTrak system, nor has Verizon expressed any intentions of providing such a test period.<sup>184</sup>

In response to WorldCom's complaints over the release of ExpressTrak, VZ-MA notes that it has begun to roll-out the ExpressTrak system on a limited basis in Maryland, Virginia, West Virginia, and Washington, D.C. VZ-MA states, however, that this roll-out has been on a trial basis and the wholesale customers using ExpressTrak in those jurisdictions have been

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<sup>183</sup> WorldCom describes ExpressTrak as "a new back-end billing system" that VZ-MA is expected to begin implementing for both retail and wholesale customers. WorldCom states that VZ-MA's implementation of ExpressTrak will replace the current Customer Record Information System ("CRIS") billing system and will provide standardized billing formats and account structures throughout the region. WorldCom contends that though ExpressTrak will benefit CLECs, it will have an impact on various OSS functions, and, therefore, must follow VZ-MA's Change Management process. VZ-MA Application, Appdx. B, Vol. 37, Tab 455, ¶¶ 73-76 (WorldCom Lichtenberg/Sivori Decl.).

<sup>184</sup> Id. at ¶¶ 78-84.

working individually with Verizon to test the new system. VZ-MA states that it does not intend to implement ExpressTrak in Massachusetts before the end of 2000, so there should be no expectation on the part of CLECs to receive documentation on the new system until the implementation timeline requires distribution of such information.<sup>185</sup> VZ-MA further notes that, unlike interface software, ExpressTrak is a back-end system that does not have the same business rule and specification requirements that are normally applied to interface software releases.<sup>186</sup>

With respect to interface documentation, WorldCom contends that Verizon's failure to provide accurate Business Rules and EDI specifications makes it very difficult for CLECs to develop and revise their own systems to interact with Verizon's OSS.<sup>187</sup> WorldCom argues that during its testing of the June 2000 LSOG-4 release in New York and Pennsylvania,<sup>188</sup> it encountered numerous problems with Verizon's Business Rules and EDI documentation. WorldCom contends that although these problems were found in other jurisdictions, the

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<sup>185</sup> VZ-MA Application, Appdx. B, Vol. 46, Tab 538, at 4765-70 (Transcript of Technical Session Held 8/22/00).

<sup>186</sup> Id.

<sup>187</sup> VZ-MA Application, Appdx. B, Vol. 37, Tab 455, ¶ 46 (WorldCom Lichtenberg/Sivori Decl).

<sup>188</sup> WorldCom's filed comments and testimony throughout this proceeding have focused primarily on Worldcom's experiences with Verizon in New York and Pennsylvania. While the Department has not excluded WorldCom from basing its arguments on extra-jurisdictional experiences, it must be noted that these experiences are not shown to be applicable to VZ-MA's performance in Massachusetts.



underlying problems with Verizon's documentation exist in all Verizon jurisdictions.<sup>189</sup>

WorldCom argues that these documentation problems force CLECs to expend greater time and effort to develop and revise their EDI interfaces.

VZ-MA responds to WorldCom's complaints by contending that WorldCom's arguments are misleading.<sup>190</sup> VZ-MA notes that of the 132 issues identified by WorldCom as being Order Business Rules-related, 44 were not related to the Business Rules. VZ-MA states that the remaining 88 issues can be broken down into four categories. First, 74 items were questions that VZ-MA was able to answer and did not require any changes to the Business Rules. Nine of the issues were actually WorldCom requests to include specific variations of existing scenarios in the Business Rules documentation. Three of the items were administrative issues. Finally, there were two issues that represented actual documentation errors that required distribution of an industry change notification to correct the error.<sup>191</sup>

Covad and Rhythms both contend that they have experienced substantial difficulties in establishing their EDI interfaces with VZ-MA. Covad argues that it began developing an EDI interface with VZ-MA in August 1998, but that VZ-MA did not respond to Covad's reported problems until early in 2000. Covad notes that it has implemented EDI interfaces with every

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<sup>189</sup> VZ-MA Application, Appdx. B, Vol. 41, Tab 488 (WorldCom's Response to DTE-WCOM-2).

<sup>190</sup> VZ-MA Application, Appdx. B, Vol. 42, Tab 494, ¶ 114 (VZ-MA August Supplemental OSS Aff.).

<sup>191</sup> Id.

major ILEC except Bell South and Verizon, despite focusing most of its resources on its development of EDI with Verizon.<sup>192</sup> Rhythms also states that it experienced numerous delays in implementing its EDI interfaces with VZ-MA and contends that once it established its EDI interface, VZ-MA constantly sent files to Rhythms that belonged to other CLECs.<sup>193</sup> Despite Covad's and Rhythms' arguments, VZ-MA maintains that the record shows that numerous CLECs and KPMG have developed EDI interfaces with VZ-MA's published documentation.<sup>194</sup> Further, VZ-MA states that neither Covad nor Rhythms has provided any evidence that VZ-MA has actively prevented them from developing and implementing their EDI interfaces.

(D) KPMG Findings

In conducting its review of VZ-MA's Change Management process, KPMG tested for the existence and functionality of the process and examined whether VZ-MA implements its process according to its design.<sup>195</sup> KPMG carried out its review by participating in the Change Management process and simulating the experience of a CLEC operating in Massachusetts. In its Final Report, KPMG states that VZ-MA's Change Management process is adequately

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<sup>192</sup> VZ-MA Application, Appdx. B, Vol. 38, Tab 462, ¶¶ 7-8 (Covad Szafraniec/Katzman Decl.).

<sup>193</sup> VZ-MA Application, Appdx. B, Vol. 46, Tab 537, at 4810-11 (Transcript of Technical Session Held 8/22/00).

<sup>194</sup> VZ-MA Application, Appdx. B, Vol. 32b, Tab 423, ¶ 188 (VZ-MA May OSS Aff.).

<sup>195</sup> VZ-MA Application, Appdx. I, Vol. 1, Tab 1, at 495 (KPMG Final Report Version 1.4).

defined and set out for CLECs.<sup>196</sup> KPMG notes that VZ-MA has defined processes in place for “escalations, negotiations, collaboratives, intervals for change, industry notification of system issues and updates, distributing documentation, testing, and implementation.”<sup>197</sup> KPMG also found VZ-MA’s processes for prioritizing CLEC-sponsored and VZ-MA-sponsored changes at the monthly Change Management meetings to be satisfactory.<sup>198</sup>

With respect to VZ-MA’s notification and documentation release time lines, KPMG reports that the established procedures were sufficient to meet CLEC’s needs. KPMG also reports that for the period of its review, VZ-MA met its established release intervals for 99 percent of Type 1 changes (emergency maintenance), 100 percent of Type 2 changes (regulatory), 100 percent of Type 3 changes (industry standards), 77 percent of Type 4 changes (VZ-MA-initiated), and 100 percent of Type 5 changes (CLEC-sponsored).<sup>199</sup> With respect to Type 4 changes, KPMG notes that VZ-MA’s performance improved greatly from 60 percent prior to the June 2000 software release to 100 percent on-time during the June 2000 release.<sup>200</sup> KPMG notes that it excluded 14 flow-through-related Type 4 changes from its measurement of VZ-MA’s interval compliance because, according to the adopted “Principles

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<sup>196</sup> Id. at 503.

<sup>197</sup> Id.

<sup>198</sup> Id.

<sup>199</sup> Id. at 505.

<sup>200</sup> Id.

of Change Management” document, “if the change has benefit and has little material impact on the interface, [VZ-MA] can implement the changes in less than 45 days.”<sup>201</sup>

KPMG also reviewed VZ-MA’s established procedures for assisting CLECs with interface development. This evaluation included a review of VZ-MA’s CTE which included KPMG’s execution of the VZ-MA Test Decks for the February 2000 and June 2000 releases. KPMG notes that, while it was able to complete CTE testing of the February LSOG-2 Test Deck within one week,<sup>202</sup> the test team experienced quality issues in its execution of VZ-MA’s February release LSOG-4 Test Deck.<sup>203</sup> KPMG states, however, that VZ-MA resolved

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<sup>201</sup> Id. at 511. KPMG released Observation Report #55 on March 28, 2000, which relates to VZ-MA’s performance with regard the timeliness of Type 4 changes and VZ-MA’s classification of flow-through improvements as non-CLEC affecting. After reviewing the July 6, 2000 document entitled “TIS Change Management Process,” KPMG accepted VZ-MA’s explanation that flow-through improvements should not be classified as CLEC-affecting changes. Appdx. L (Observation Report #55); Appdx. M (KPMG Observation Status Summary dated August 25, 2000).

<sup>202</sup> Although KPMG was able to complete its CTE testing of VZ-MA’s February LSOG-2/3 release on schedule, KPMG released Exception Report #7 on February 29, 2000, noting that VZ-MA had made three separate revisions to the standard Test Deck after the start of the new release testing period. KPMG noted that this instability in the CTE could prevent CLECs from adequately testing their interfaces. See VZ-MA Application, Appdx. I, Vol. 2, Tab 2 (Exception Report #7). KPMG retested the LSOG-2/3 Test Deck as part of the June 2000 release. Following this retest, KPMG issued its Disposition Report for Exception #7, where it noted that the stability of the CTE had improved greatly and confirmed that VZ-MA had followed the established new release testing procedures. See VZ-MA Application, Appdx. I, Vol. 2, Tab 2 (Disposition Report for Exception #7).

<sup>203</sup> VZ-MA Application, Appdx. I, Vol. 1, Tab 1, at 527 (KPMG Final Report Version 1.4). KPMG issued Exception Report #3 and Exception Report #5 on February 16,  
(continued...)

problems uncovered during the February testing, and KPMG “noted improvements in the quality of the Test Deck results” during June release testing of both LSOG-2 and LSOG-4.<sup>204</sup>

During its interface development review, KPMG also evaluated VZ-MA’s procedures for developing and updating interface specification documents, for providing support to CLECs in their interface development efforts, and for uncovering and resolving problems associated with the interface development process and the CTE. KPMG found that VZ-MA’s policies and

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<sup>203</sup>(...continued)

2000, where it stated that it was unable to validate VZ-MA’s LSOG-4 Pre-Order and Order Test Decks. In Exception #3, KPMG reported that it experienced various instances of system unavailability in the LSOG-4 test environment during the new release period, making completion of the Test Decks validation difficult. See VZ-MA Application, Appdx. I, Vol. 2, Tab 2 (Exception Report #3). KPMG also noted that problems with the accuracy of the Test Decks indicated that VZ-MA had not performed adequate QA testing of the release. KPMG further stated that the frequent revisions VZ-MA made to correct errors in the Test Decks prevented CLECs from having the opportunity to test the LSOG-4 release in a stable environment. See VZ-MA Application, Appdx. I, Vol. 2, Tab 2 (Exception Report #5). VZ-MA accepted KPMG’s assessment and KPMG conducted a retest during the June 2000 LSOG-4 release. VZ-MA also noted that the system unavailability was due to software and hardware failures that caused outages. See VZ-MA Application, Appdx. I, Vol. 2, Tab 2 (VZ-MA Response to Exception #3). KPMG states in its Disposition Reports for Exceptions #3 and #5 that it experienced no further outages in the LSOG-4 CTE, and that it successfully completed its validation of the pre-order and order Test Decks within the defined new release testing period. KPMG notes that the quality of the June Test Decks indicate that VZ-MA adhered to its established QA procedures. See VZ-MA Application, Appdx. I, Vol. 2, Tab 2 (Disposition Report for Exception #3); see also VZ-MA Application, Appdx. I, Vol. 2, Tab 2 (Disposition Report for Exception #5).

<sup>204</sup> VZ-MA Application, Appdx. I, Vol. 1, Tab 1, at 527 (KPMG Final Report Version 1.4).

procedures satisfactorily met each of these requirements.<sup>205</sup> In addition, KPMG evaluated whether VZ-MA provides CLECs with adequate information to establish and maintain their account relationships with VZ-MA. KPMG reports that VZ-MA has adequate procedures, documentation, and support to enable CLECs to establish and maintain wholesale account relationships with VZ-MA.<sup>206</sup>

ii. Technical Assistance and Help Desk Support

(A) Standard of Review

The FCC's emphasis on the existence of adequate technical assistance and help desk support has been noted in numerous § 271 orders. The FCC noted in the Ameritech Michigan Order that a BOC must demonstrate it "is adequately assisting competing carriers to understand how to implement and use all of the OSS functions available to them."<sup>207</sup> The FCC has found that a BOC's provision of technical assistance and help desk support is evidence that it provides efficient competitors with a meaningful opportunity to compete.<sup>208</sup>

(B) VZ-MA's Offering

In meeting its requirement to assist competing carriers in understanding how to use all

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<sup>205</sup> Id. at 528-39.

<sup>206</sup> Id. at 547-554.

<sup>207</sup> Bell Atlantic New York Order at ¶ 126, citing Ameritech Michigan Order, 12 FCC Rcd at 20616.

<sup>208</sup> Bell Atlantic New York Order at ¶ 126.

of the available OSS functions, VZ-MA provides an extensive set of publications and documentation to CLECs. First, VZ-MA publishes the technical specifications necessary for CLECs to build and connect their OSS interfaces to VZ-MA's systems. These specifications include the Pre-Order and Order EDI Guides and the Pre-Order and Order Documentation and Business Rules.<sup>209</sup> VZ-MA also provides CLECs with extensive CLEC and Reseller Handbooks, on CD-ROM and through VZ-MA's wholesale web site, which inform CLECs on the proper procedures for conducting their daily business with VZ-MA's systems and personnel.<sup>210</sup> VZ-MA notes that it publishes complete editions of the handbooks on an annual basis, but provides CLECs with updates to particular sections of the handbooks throughout the year as policies change to meet VZ-MA and CLEC needs. VZ-MA states that CLECs can maintain up-to-date versions of the CLEC and Reseller Handbooks via the VZ-MA wholesale web site, which provides the capability for CLECs to download updated sections of the publications directly to their CD-ROM versions.<sup>211</sup> Finally, VZ-MA notes that the Integrated Documentation Application ("IDA") offers CLECs a one-of-a-kind combined document that joins the LSOG industry guidelines and VZ-MA Business Rules into a single document. The IDA also automatically builds change logs to enable CLECs to review the revisions and

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<sup>209</sup> VZ-MA Application, Appdx. B, Vol. 32b, Tab 423, ¶ 179 (VZ-MA May OSS Aff.).

<sup>210</sup> Id.

<sup>211</sup> Id. at ¶ 181.

updates that are made to both pieces of the document.<sup>212</sup>

VZ-MA also claims it has sufficient personnel to meet the business needs of CLECs operating in Massachusetts. VZ-MA's Telecommunications Industry Services Operations Center ("TIS OC") service representatives assist CLECs in the submission and processing of their order transactions.<sup>213</sup> VZ-MA also has a Wholesale Customer Care Center ("WCCC"), formerly the System Support Help Desk, which was created to provide a single point of contact for CLECs with general service questions. VZ-MA states that the WCCC personnel are trained to deal with a wide range of potential CLEC concerns. However, VZ-MA notes that the WCCC representatives are not expected to answer all questions directly, but instead are trained to know what area of VZ-MA's operations is responsible for responding to each type of issue.<sup>214</sup> VZ-MA explains that in order to track the resolution of CLECs' WCCC calls, WCCC representatives are required to open a trouble ticket for every call they receive, regardless of the issue behind the call.<sup>215</sup> As of August 2000, the WCCC was staffed with 43 full-time representatives to handle CLEC inquiries, up from just six full-time representatives at

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<sup>212</sup> VZ-MA Application, Appdx. B, Vol. 42, Tab 494, ¶¶ 121-122 (VZ-MA August Supplemental OSS Aff.).

<sup>213</sup> VZ-MA Application, Appdx. B, Vol. 32b, Tab 423, ¶ 23 (VZ-MA May OSS Aff.).

<sup>214</sup> Id. at ¶ 200.

<sup>215</sup> Id. at ¶ 201; see also VZ-MA Application, Appdx. B, Vol. 27, Tab 350 (VZ-MA's Response to RR-DTE-120).



the beginning of 1999.<sup>216</sup> VZ-MA notes that it continues to monitor the performance of the WCCC in making timely responses to CLEC inquiries, and that VZ-MA will supplement the WCCC staff as needed.<sup>217</sup>

VZ-MA also assists CLECs in conducting their business through its offerings of detailed training programs and CLEC workshops. VZ-MA states that it has developed extensive training programs for CLECs purchasing UNEs and resale services and holds training sessions at its own offices as well as on-site at CLECs' operations.<sup>218</sup> VZ-MA notes that the training programs have been divided into specific areas of focus so that CLEC representatives can focus their training on the specific issues in which they will be involved. Throughout the region, VZ-MA trained 1,278 CLEC representatives in 1999, and trained an additional 300 in the first quarter of 2000.<sup>219</sup>

In addition to the training programs, VZ-MA also provides CLECs with numerous workshops that focus on specific areas of CLEC interest. VZ-MA's Change Management organization is responsible for developing the topic areas for these CLEC workshops based on the areas of concern identified through Change Management meetings, help desk inquiries, and

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<sup>216</sup> VZ-MA Application, Appdx. B, Vol. 46, Tab 533, at 4581-82 (Transcript of Technical Session Held 8/21/00).

<sup>217</sup> Id. at 4588-90.

<sup>218</sup> VZ-MA Application, Appdx. B, Vol. 32b, Tab 423, ¶¶ 189-191 (VZ-MA May OSS Aff.).

<sup>219</sup> Id. at ¶ 192.

informal CLEC contacts. The workshops have focused on such issues as Help Desk processes, CLEC-to-CLEC migrations, and flow-through improvements.<sup>220</sup> VZ-MA notes that it notifies CLECs of these workshops through industry mailings sent to the CLEC contacts in the Change Management process. In addition to the announcement of these workshops, VZ-MA's industry mailings also notify CLECs of information regarding billing issues, the addition of new Universal Service Order Codes ("USOCs"), and other information that does not fall into the standardized Change Management process.<sup>221</sup>

(C) Competitors' Positions and VZ-MA's Response

CLEC complaints about VZ-MA's technical assistance center around the performance of the WCCC. First, AT&T contends that the WCCC does not provide timely responses to CLEC inquiries. AT&T also argues that the WCCC is not an efficient means for CLECs to obtain assistance because CLECs do not have access to VZ-MA technical personnel who would be able to resolve CLEC problems more efficiently.<sup>222</sup> WorldCom and Rhythms echo AT&T's complaints, adding that the WCCC personnel are inadequately trained to answer technical

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<sup>220</sup> Id. at ¶¶ 65, 154.

<sup>221</sup> VZ-MA Application, Appdx. B, Vol. 46, Tab 533, at 4617 (Transcript of Technical Session Held 8/21/00).

<sup>222</sup> VZ-MA Application, Appdx. B, Vol. 38, Tab 460, at 27-28 (AT&T July Supplemental Comments).

questions and often fail to respond to CLEC calls in a timely manner.<sup>223</sup> WorldCom also argues that the WCCC does not perform any root-cause analysis on CLEC-reported problems, and, therefore, there is no assurance that once a problem is fixed it will not occur again in the future.<sup>224</sup> Finally, AT&T notes that the frequent turnover of personnel in the WCCC has made the Help Desk unstable and made it difficult for CLECs to obtain adequate assistance.<sup>225</sup>

VZ-MA explains, in response to the CLEC complaints, that there have been some changes to the Help Desk in the past few months, but states, contrary to CLEC contentions, that these changes have improved VZ-MA's ability to assist CLECs. VZ-MA notes that technical personnel do not speak to CLECs directly on a regular basis because their primary duties are to research and resolve issues that are reported by CLECs or by VZ-MA's retail customers.<sup>226</sup> VZ-MA further states that the WCCC personnel are not trained to be able to answer every CLEC inquiry immediately, but instead are trained to know which area of VZ-

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<sup>223</sup> VZ-MA Application, Appdx. B, Vol. 37, Tab 455, ¶¶ 87-90 (WorldCom Lichtenberg/Sivori Decl.); see also VZ-MA Application, Appdx. B, Vol. 38, Tab 462, ¶ 23 (Rhythms July Williams Aff.).

<sup>224</sup> VZ-MA Application, Appdx. B, Vol. 37, Tab 455, ¶ 89 (WorldCom Lichtenberg/Sivori Decl.).

<sup>225</sup> VZ-MA Application, Appdx. B, Vol. 38, Tab 460, at 28 (AT&T July Supplemental Comments).

<sup>226</sup> VZ-MA Application, Appdx. B, Vol. 42, Tab 494, ¶ 133 (VZ-MA August Supplemental OSS Aff.).

MA's operations will be able to respond to a particular CLEC question.<sup>227</sup> With respect to root-cause analysis, VZ-MA explains that it performs root-cause analysis on every CLEC-reported trouble. VZ-MA notes, however, that in cases where a root-cause is not determined at the time the trouble is resolved, VZ-MA will not delay reporting the resolution of the trouble to the CLEC simply because the root-cause analysis is not complete.<sup>228</sup> Finally, VZ-MA responds to AT&T's complaint about the turnover in the WCCC by stating that this occurrence was the result of the WCCC's recent move from Maryland to New Jersey. VZ-MA explains, though, that the turnover experienced was a temporary issue, and that Verizon took a number of steps to ensure that the level of service was not diminished during this period. VZ-MA notes that the WCCC manager and two supervisors were transferred to the New Jersey WCCC when it opened to ensure a continued level of high performance, and that the three new supervisors at the New Jersey WCCC were trained in the Maryland WCCC prior to the move to New Jersey.<sup>229</sup> VZ-MA states that even the temporary problem of high turnover rates did not impact the level of Help Desk service provided to CLECs.

(D) KPMG Findings

As part of its evaluation of VZ-MA's OSS, KPMG assessed whether VZ-MA provides adequate technical assistance to enable CLECs to compete. KPMG reviewed VZ-MA's

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<sup>227</sup> Id. at ¶ 128.

<sup>228</sup> Id. at ¶ 129.

<sup>229</sup> Id. at ¶ 134.

offerings in this area through evaluations of VZ-MA's systems Help Desk performance and VZ-MA's CLEC Training Programs.

KPMG conducted an extensive review of VZ-MA's System Support Help Desk, now WCCC, through interviews with Help Desk personnel, review of Help Desk process documentation, and observation of Help Desk activities.<sup>230</sup> KPMG reports that it found VZ-MA's Help Desk support to be satisfactory to meet the needs of CLECs operating in Massachusetts. In particular, KPMG notes that VZ-MA's WCCC has adequate procedures defined for the receipt, categorization (severity coding), processing, tracking, and resolution of CLEC calls, and that VZ-MA follows its documented procedures.<sup>231</sup>

KPMG also reviewed VZ-MA's WCCC performance with respect to the timely closure of CLEC-reported issues. Because of the wide range of issues that result in a CLEC's opening of a Help Desk trouble ticket, there are no C2C standards for the resolution of Help Desk trouble tickets. During its evaluation, KPMG reviewed 9,969 Help Desk trouble tickets and reports that 56 percent of the tickets were resolved and closed on the same day they were opened, and an additional 15 percent were resolved within one week.<sup>232</sup> KPMG notes that while 29 percent of the reviewed trouble tickets required longer than one week to close, there

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<sup>230</sup> VZ-MA Application, Appdx. I, Vol. 1, Tab 1, at 593 (KPMG Final Report Version 1.4).

<sup>231</sup> Id. at 600-603.

<sup>232</sup> Id. at 609.

are a variety of circumstances that can cause trouble tickets to require long resolution periods. For example, some Help Desk tickets require system fixes to be scheduled and implemented in future software releases. Also, KPMG reports that in some instances trouble ticket closure was delayed due to the failure of the CLEC to confirm resolution of the reported trouble and accept closure of the ticket, or the reported trouble was found to be the result of a CLEC-originated problem and was not closed until the CLEC confirmed to VZ-MA that it had resolved its problems.<sup>233</sup>

KPMG's evaluation of VZ-MA's CLEC Training programs was designed to "determine the existence and functionality of procedures for developing, publicizing, conducting, managing, and monitoring CLEC training."<sup>234</sup> KPMG conducted its evaluation through reviews of the CLEC training documentation and interviews with the VZ-MA personnel responsible for managing VZ-MA's CLEC Training programs.<sup>235</sup> KPMG reports that VZ-MA has a defined and documented program to provide training to CLEC representatives in a clear and consistent format.<sup>236</sup> KPMG also notes that VZ-MA's training programs are capable of

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<sup>233</sup> Id.

<sup>234</sup> Id. at 615.

<sup>235</sup> Id.

<sup>236</sup> VZ-MA Application, Appdx. I, Vol. 1, Tab 1, at 619-620 (KPMG Final Report Version 1.4)

being customized at a CLEC's request to meet that CLEC's particular training needs.<sup>237</sup> VZ-MA's CLEC Training program also has in place a process for accepting input and feedback from CLECs about the quality of the training program and suggestions for improvement.<sup>238</sup>

iii. Conclusions

The Department finds that VZ-MA has satisfied its requirements in the offering of nondiscriminatory access to its OSS functions with respect to Change Management and Technical Assistance. Specifically, based upon the evidence in the record and KPMG's OSS Evaluation findings, the Department finds that VZ-MA provides CLECs with sufficient documentation to build and maintain their OSS interfaces. Further, the Department finds that VZ-MA's defined Change Management process is sufficient to meet the needs of CLECs and that CLECs have substantial input in that process. The Department also finds that VZ-MA has adhered to its Change Management process over time, as has been confirmed by KPMG. Finally, VZ-MA has convinced the Department that it provides CLECs with a significant level of technical assistance and help desk support through its training programs, published documentation, and the WCCC.

e. Pre-Ordering

i. Standard of Review

The FCC has stated often that pre-ordering access is a critical component of a carrier's

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<sup>237</sup> Id. at 620.

<sup>238</sup> Id. at 621.